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14. ABSTRACT Partnering Research Involving Mentoring and Education in Prostate Cancer (PRIME) is a partnership between two nursing schools, Duke University School of Nursing and North Carolina Central University (NCCU), an historically black college or university (HBCU). Our goal is to build a collaborative relationship between Duke University and NCCU that brings together students and faculty mentors to facilitate opportunities for underrepresented minority students to learn about prostate cancer. To accomplish this goal, we are capitalizing on the strengths of both universities to conduct a didactic and hands-on training program to expose undergraduate students to prostate cancer prevention, detection, and control research. The objectives of the PRIME program are to provide undergraduate nursing students with mentored experiential learning to (1) understand the burden of prostate cancer, particularly among African Americans; (2) develop a beginning level of competence in technology resources for information gathering and data management in prostate cancer research; (3) obtain introductory knowledge about the research process (4) gain hands-on experience in community-based prostate cancer control activities; and (5) experience role model development for research and healthcare practice careers, and begin to build networks with researchers and health professionals in a Research I environment. For summers 2005 and 2006, a total of 9 undergraduate nursing students have participated in this 10-week prostate cancer research mentored experience. The summer training was held at Duke University.					
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## Introduction

This is the second year progress report for Award W81XWH-05-1-0209. The report starts with an overview of the program, followed by a report of Statement of Work.

PRIME is a partnership between two nursing schools, Duke University School of Nursing and North Carolina Central University (NCCU), an historically black college or university (HBCU). Our goal is to build a collaborative relationship between Duke University and NCCU that brings together students and faculty mentors to facilitate opportunities for underrepresented minority students to learn about prostate cancer and its research. A need exists for nursing students in HBCU's to be exposed to prostate cancer prevention, detection, and control research. The Institute of Medicine Report (IOM), *The Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce*, 2002, addressed the gaps and under representation of minorities in health professions. In particular, the report noted that a change in ethnic and racial demographics of the United States by the year 2020 means there could be an under representation of minorities in health professions, relative to the numbers of minorities in the population, affected by cancer and other chronic diseases.

NCCU is the nation's first state-supported liberal arts college for African American students, and it is a historically black institution. Approximately eighty-nine percent of the student body identifies themselves as black or African American, 7% as white, non-hispanic, and 5% as other. Faculty identify themselves as 79% black, and 21% white or other. The 103-acre campus is located in Durham in the heart of the oldest section of the community. The NCCU Department of Nursing is 54 years old. More than 500 pre-nursing students in the university identify nursing as their major.

**Specific Aims:** The key to expanding the number of minority health care professionals and eliminating ethnic and racial health disparities related to cancer, including prostate cancer, lies in improving minority youth opportunities to find out about healthcare opportunities early in their education. Ultimately, the exposure will lead to more minorities entering the nursing profession and pursuing graduate programs in advanced practice and research that improve prostate cancer statistics. To accomplish this goal, we are capitalizing on the strengths of both universities to conduct a didactic and hands-on training program to expose undergraduate students to prostate cancer prevention, detection and control research.

**Objectives:** The objectives of the PRIME program are to provide students with mentored experiential learning to (1) understand the burden of prostate cancer, particularly among African Americans; (2) develop a beginning level of competence in technology resources for information gathering and data management in prostate cancer research; (3) obtain introductory knowledge about the research process (4) gain hands-on experience in community-based prostate cancer control activities; and (5) experience role model development for research and healthcare practice careers, and begin to build networks with researchers and health professionals in a Research I environment.

**Study Design:** We are following the successful model implemented in year one. For a second year, this intense summer program was based on concentrated one-to-one mentoring of pre-nursing students by mentors, with didactic, observational, and experiential training in prostate cancer education and research. A key feature of the PRIME program is provision of student mentoring for a beginning understanding of prostate cancer research by learning basic research skills. Secondly, career development and role modeling for academic success are strong features of this program.

In the spring of each year, this summer mentorship opportunity is advertised to students who have identified nursing as their intended major. Interested students make application. Eight students were selected based on the best application essay indicating why the applicant is interested in pursuing mentorship in prostate cancer, and their grade point average of at least 3.0, and no tuition and fee support for college expenses from scholarship sources during the previous or upcoming school year. Applicants were screened by the designated faculty at NCCU department of nursing. Face-to-face interviews were conducted by the program principal investigator. Interviews were held at NCCU and four students were selected with four alternates. Alternates were selected should chosen students decline the mentorship opportunity.

## **Body**

In our second program year, four students and four alternates were selected for the PRIME program from a pool of 10 applicants (three males, 7 females). Three students selected were completing their sophomore year, and one student was completing her freshman year. Three male and one female student were selected; two male students later declined the offer. One declined due to a full-time work commitment, and the other male declined due to a competing internship opportunity. Two female alternates were selected. Scientific faculty mentors with prostate cancer related research were recruited from among Duke University Medical Center's Research 1 environment. Three faculty volunteered as mentors and were matched to students. One of the faculty provided mentorship to two students, and two other faculty mentored one student each.

Three Duke University Medical Center faculty served as mentors:

- Cathrine Hoyo, PhD, Epidemiologist, Department of Family and Community Medicine  
One student
- Lisa PhD, Clinical Psychologist, Psychiatry and Behavioral Sciences  
One student
- Leon Sun, MD, Urologist, Department of Surgery, Division of Urology  
Two students

All mentoring faculty are members of the Duke University Medical Center Cancer Prevention and Control Program.

During the 10 weeks, the following activities occurred:

- Duke University identification badges and parking permits secured; tour of the Duke University campus, medical center, and nursing school.
- Tour of the medical center library.
- Completion of two Safety, three HIPPA and three Institutional Review Board (IRB) tutorial education modules prior to access to mentors' databases.  
\*Students were required to successfully complete three IRB tutorial modules and the post-test for each. Two modules were required:
  - Protecting Research Subjects
  - What Counts As Research with Human Subjects

A third module could be selected from among IRB tutorials including:

- Informed Consent for Research
  - Protecting the Confidentiality and Privacy of Research Participants
  - Research in Emergency Settings
  - Social Science Research in a Medical Setting
  - Using Databases in Research
- Library hands-on session on conducting searches of the scientific journal databases. Students learned to conduct searches related to their selected project. The projects were based on the work of their mentors.
- Instruction and practice sessions on how to read and understand research literature.
- Weekly two hour seminars for instruction on writing a research abstract in preparatory for writing an abstract for their own work. With guidance from their mentors, students selected a research project based on the work of their mentors. The seminar sessions also were used for trouble shooting professionalism issues such as any tardiness, requests for leaving before the appointed time, and difficulties understanding the work load.
- Hands-on instruction in computer programs: Excel, PowerPoint, and SPSS.
- Direct mentorship by the faculty mentor over the 10 weeks. This included data entry and journal searches. The students shadowed for two days each with one urologist in a urology clinic observing discussions with patients during and after diagnosis for prostate cancer and other urologic disorders, and for follow-up treatment.
- Students attended one Duke University Medical Center Institutional Review Board (IRB) meeting to observe a team of medical center IRB members present and evaluate new and renewal study proposals.

- Final day PowerPoint presentation on each student's project. These were presented to an assembly of mentors, faculty, family members, and friends, followed by a reception in celebration of the students' achievements during the program. Certificates of participation were presented to each of the summer interns.
- At the end of the program, a paper-pencil evaluation was completed by each student; a face-to-face interview was conducted with each mentor. Feedback from these two evaluations was used in preparation for the subsequent summer (2007).
- September 23 and 24, 2006, gained hands-on experience in community-based prostate cancer control activities in Durham, NC. The students assisted with the registration, clinic flow, and consenting process in two day-long prostate cancer screening clinics.
- Two of the four students attended the one-day 28th Annual Minority Health Conference sponsored by the University of North Carolina School of Public Health, Minority Health Caucus, Chapel Hill, N.C., February 23, 2007.

### **Statement of Work**

The Statement of Work has been refined with details of the work to be accomplished for the grantee (Duke University School of Nursing *or Duke*) and the subcontracting party (North Carolina Central University *or NCCU*).

### **STATEMENT OF WORK**

Grant Awarded

Years 1, 2, 3

Task 1: **NCCU**: Planned for marketing PRIME program to NCCU pre-nursing students

Months 1-3 (*January, February, March of each year*)

- a. Developed plan for recruiting and contacting students.
- b. Two graduate student assistants selected to work with program (May through July/August).
- c. Designed applicant qualifications, the application, and interview process.
- d. Marketed and recruited students from among NCCU students who identify nursing as their intended major.
- e. Minimal qualifications: minority student, student availability for summer program, quality of the program interest essay, and 3.0 minimal Grade Point Average (GPA).
- f. Scheduled interviews at the NCCU Department of Nursing after NCCU prescreening. Interviews were conducted by Duke.
- g. Planned reception for selected students, their faculty, and family members at NCCU Department of Nursing.

- h. Plan and documented with Dr. Lorna Harris, Dean, Department of Nursing at NCCU mentoring contact schedule for fall and spring semesters which was maintained with students at least once each semester.

Task 2: Months 4-5 (April, May)

- a. **NCCU**: Reviewed ongoing NCCU mentoring schedule (April).
- b. **NCCU**: Validated GPAs for applicants. Monitored end of semester GPA for previous year's program students.
- c. **DUKE**: Recruited mentors and refined schedule for 10-week summer program.
- d. **DUKE**: Conducted 10-week summer program (May through July).
- e. **NCCU**: Prepared for students monthly stipends.

a. Task 3: Months 6-9 (June, July, August, September)

- b. **DUKE**: Students worked with mentors.
- c. **DUKE**: Ongoing meetings with research faculty and graduate student assistants.
- d. **DUKE**: Engaged in workshops and seminars.
- e. **DUKE**: Students prepared abstracts based on their summer projects. End of program presentations session conducted. Final day presentations attended by mentors, faculty, family, and other guests.
- f. **DUKE**: Conducted evaluation and wrap-up, and student evaluations.
- g. **DUKE**: Face-to-face mentor evaluations were obtained.
- h. **DUKE**: Program administrative tasks.
- i. Obtained tuition amount and paid towards fall tuition to NCCU for current year students. Tuition paid for instate rate only – subject to that allowable by original budget and annual budget revisions.

Task 4: **NCCU**: (September) Coordinated student volunteer activity for two-day September prostate cancer education month free prostate cancer screening clinic at Lincoln Community Health Center and Duke University Medical Center; on third Saturday and Sunday annually.

Task 5: Months 10-12 (October, November, December)

- a. **NCCU**: Checked GPA at end of fall semester-need to maintain 3.0 overall GPA throughout project, if student falls behind, one time January stipend bonus will not be awarded. Two of four students received the stipend bonus. Two students withdrew from school during the fall semester.
- b. **NCCU**: Facilitated continued regular mentorship for two continuing students.

Task 6: **DUKE**: Overall program evaluation and submission to DOD  
Month 12 (delayed until August 2007).

Task 7: **NCCU**: Two students prepared for attendance at the 28th Minority Health Conference, University of North Carolina, Chapel Hill.

Task 8: Final project evaluation in Year 3.



As in Year 1, Year 2 found undergraduate students are less likely to have been exposed to information about prostate cancer, its incidence and mortality. Through this one-one mentorship, this training program provided background information and research exposure on the morbidity and mortality related to prostate cancer, diagnosis and treatment including surgical intervention, and the ethnic, racial disparity for the disease. Students' grasp of a sophisticated understanding of a complex disease was accomplished so that during and by the end of the summer, they were able to communicate at a high level with their mentors and other scientists with whom they had the opportunity to discuss the disease and their mentored work.

### **Key Research Accomplishments:**

The following abstracts were developed and the research presented at the School of Nursing:

- Summer Intern Student Shunyoung Smith, rising junior, under the mentorship of Cathrine Hoyo, Ph.D., Epidemiologist, Duke University Medical Center, Department of Family and Community Medicine:  
"Association Between Inflammatory Markers and Prostate Carcinogenesis: A Meta-Analytic Review"
- Summer Intern Student Ashton Fearington, rising sophomore, under the mentorship of Lisa C. Campbell, Ph.D., Assistant Professor, Duke University Medical Center, Psychiatry and Behavioral Sciences:  
"Comorbid Medical Conditions and Post-Treatment Quality of Life in African American Prostate Cancer Survivors"
- Summer Intern Student Kenneth Joseph, rising junior, under the mentorship of Leon Sun, MD, Urologist, Department of Surgery, Division of Urology:  
"The Differences between African-Americans and Non-African Americans With Regard to Prostate Specific Antigen From The PSA Era to Present"
- Summer Intern Student Alisha Childs, rising junior, under the mentorship of Leon Sun, MD, Urologist, Department of Surgery, Division of Urology  
"The Effects of Age and Race on Gleason Score and Tumor Stage"

### **Reportable Outcomes:**

Successful completion of the summer program for four students; four were enrolled back in their home campuses for the fall semester, and two students subsequently withdrew from school due to family obligations. The two continuing students maintained a 3.0 GPA and are continuing in the nursing major with high interest in patient care and research.

### **Conclusions:**

### **Program Evaluation:**

Year 2, like year 1 of this program, was highly successful. Four African-American students from a local HBCU had a beginning level of learning experience in prostate cancer research. Students evaluation feedback indicated that they had been well-exposed to health care research, an area they had not been involved in before. They felt that they had learned a great deal from their mentors. Further, parts of their mentored experience will be applicable in improving their understanding of nursing research in their academic programs and future nursing careers.

These students were engaged in a concentrated 10-week mentored summer research program. All of the students were at similar levels of unexposure to cancer research and all had the potential and the opportunity to gain a great deal from the internship. Most of the experiences and activities were completely new for the participants. They had no research training in a particular area; nor had they been exposed to information on the prostate. Thus, this program was able to provide a learning experience and address student needs that may not be addressed elsewhere or at any other time in their academic career. Furthermore, we were very successful in meeting the proposed goals of the program and in some areas even reaching beyond our predetermined expectations, particularly with the amount of materials on the prostate and research that the students were able to learn and understand. During their final presentations students addressed a wide audience of Duke and NCCU faculty and community members, engaging in a discussion of the ways in which prostate cancer can be controlled through proper screening and early detection, and research methodology.

**The goals for this program were to help student learn to:**

**(1) Understand the burden of prostate cancer, particularly among African Americans**

Students presented their research projects on the final day of the internship. All of the presentations adequately highlighted the importance of prostate cancer research by addressing the affect this type of cancer has on the population and the higher risk of prostate cancer among African-Americans.

**(2) Develop a beginning level of competence in technological resources for information gathering and data management in prostate cancer research, and writing about and presenting the research.**

- a.) The students performed their own literature searches for background information with which to form their hypotheses. One student conducted a thorough meta-analysis on inflammatory markers associated with obesity and prostate carcinogenesis. One student learned to use a database to study quality of life among prostate cancer survivors. Two students were required to code positive surgical margin data and scan and continue to build the database that store these critical outcomes. For their final presentations, all of the students learned how and wrote up a full abstract. Basics of manipulating the SPSS data analysis program were taught.

One student conducted a literature review as her primary project. In order to give her experience with data analysis, a part of her learning involved computational meta-analytic (CMA) software to analyze and interpret data from the review literature. CMA use affect size from primary studies to produce one effect size across all of the studies.

Students were instructed in the use of PowerPoint as a tool for presenting their research. As a final project, all students completed PowerPoint presentations.

We can be confident that all of the students left this program with at least a beginning level of competence in all of our goal areas. Although the students still have a large learning curve in developing the skills learned throughout the internship, they were most likely ahead of their peers going into the next year of the undergraduate nursing program.

**(3) Acquire an introduction to the research process through a mentored independent research project addressing some aspect of prostate cancer control, work with the Duke mentor's prostate cancer research, and observations and interactions with research faculty at Duke University Medical Center.**

All of the students worked closely with a mentor who was involved in prostate cancer research. Each student left the internship with a very good understanding of what their mentors research was about and what purpose it served. As in the previous summer's students, arranging weekly observation and interaction with research and clinical faculty other than their immediate mentors was somewhat difficult. However, in addition to their primary mentors, students were advised by two graduate student assistants from the Duke medical center environment. On-site shadowing with a urologic surgeon in a clinical setting occurred with Dr. Cary Roberston who had been a mentor in this project in the previous summer. In addition, students meet with the nursing team in the Urology clinic.

Students observed an institutional review board meeting to learn about clinical trials and research management in a university setting. This meeting was of particular interest, as their advisors were conducting primary research that had been reviewed by the IRB committee. Attending the meeting allowed students to gain knowledge concerning the extensive preparation that goes into conducting clinical trials, particularly with sensitive research populations such as African American males.

**(4) September 23 and 24, 2006, gain hands-on experience in community-based prostate cancer control activities**

The students participated in the free prostate cancer screening program held at the Lincoln Community Center and Duke University Medical Center, both in Durham, North Carolina. Approximately 500 men participated in the annual free screening clinics.

**(5) Experience role model development for research and healthcare practice careers, and begin to build networks with researchers and health professionals in a major university environment**

Students were given the opportunity to build networks with their mentors and research staff in their immediate environment. However, greater exposure to different research and clinical faculty will help them build better networks and find other researchers with whom they would want to keep in close contact. The PRIME program has the potential to help student form long standing mentorship relationships. Another barrier to the building of networks was the motivation of the students to form these types of relationships. The need for a professional network was not a salient value for these students who were only going into their second or third year of undergraduate education.

**Overall perspectives on the students' ability to make the best use of the learning and research environment:**

*Alisha Childs.* Alisha was a rising junior at NCCU, who entered the program when another student dropped out of the selection process. She showed immense motivation before her acceptance, where she attended a reception for PRIME at NCCU, and spoke with Dr. Price, PI, about her future interest in the program. Although there were no spots remaining for students at that time, Alisha sought the opportunity to let her strong interest in the program be known which demonstrated that she was an enthusiastic student.

Alisha was the perfect example of the type of student that PRIME seeks. She came equipped with a high level of motivation, a willingness to learn, and an eager passion as reported by her mentor, Dr. Sun. Where Alisha lacked in research skills, she compensated in regular late night meetings with her mentor and lab group, in attempt to understand a rather complex data set. For a rising junior, her eventual level of understanding for the data was extensive. In the end, Alisha's final project was well accomplished but also demonstrated that she needed more assistance than she had realized. Although eager, Alisha did not know when to ask her mentor for help in understanding more complex issues encountered in the research.

*Kenneth Joseph.* Ken, a rising junior, also worked with Dr. Sun. He was one of two second degree students who decided that he was interested in a career in nursing later in life. Ken was also willing and motivated, as he, too, spent extensive time with Dr. Sun after hours. Ken was another model student. During weekly seminars and while in clinic rotation, Ken constantly asked questions. He demonstrated a consistent level of interest and enthusiasm throughout the program. Unfortunately, Ken did not discuss family difficulties with his home campus faculty mentor and nursing dean once the fall semester began, and withdrew from school early in the fall semester.

*Ashton Fearrington.* Ashton was also a rising sophomore at NCCU. She emerged as both motivated and productive, according to her mentor, Dr. Lisa Campbell. From the beginning, Ashton engaged in data entry for her lab, familiarizing herself with the measures used in Dr. Campbell's qualitative research. Due to her first hand experience with the data, Ashton was able to conduct extensive data analysis with the help of her mentor. Her assignments were on time and up to par with the program expectations.

The relationship between Ashton and Dr. Campbell is one in which PRIME should seek to attain for all students and mentors. Dr. Campbell was thoroughly involved and helped Ashton to produce a high level of work. Ashton was the only student to fully take advantage of SPSS data analysis, as she was able to run ANCOVA's and interpret the data. As a result of the extensive mentorship that Ashton received, she needed the least help for her exceptional final presentation. Of all the students, Ashton was extremely prepared and proved the most prepared for the final presentation.

*Shunyoung Smith.* Shunyoung was one of the more experienced students with a beginning knowledge of the basics of research, having received her B.A. in Sociology from the University of North Carolina, Chapel Hill. As a second degree student, she was equipped with a level of academic maturity that encouraged the other students. As such, Shunyoung was encouraged to conduct a meta-analytic review of the research in her mentor's field, which consisted of compiling the statistical information from each review. Admittedly, this review was extremely labor intensive for the 10 weeks. The final project and presentation were impressive. Shunyoung was very proud of her presentation. A challenging project, a meta-analysis is a time consuming process that requires more than 8-weeks to fully comprehend. Shunyoung felt as though she had not learned as much about the process of meta-analyzing the review, however, she was thoroughly informed about the causal mechanisms that lead to prostate cancer. This student, unknowing to the principal investigator or her home university, also had family burdens and likewise dropped out of nursing school in the fall semester.

#### **Unexpected Difficulties Encountered:**

Students do not expect the intensity of the program and their mentor's on task research demands. They are accustomed to the academic year where there are hours of breaks between classes. Giving full attention for a full day in the academic environment in a research intensive institution was a behavior that had to be understood and adjusted to by all four students.

More observation experiences and interaction with other medical center researchers will be planned and strived for in the subsequent summer.

Personal and family issues interfere with the older student adult learner. These students are motivated to return to college to advance their degrees to a more compatible career, but encounter family issues that slow or interfere with the academic process.

#### **So What**

We believe that we have an excellent undergraduate research training model. The results of the program evaluation will be used to improve planning and conduct of our program in Year 3.

## References

- AHRQ (2002). Task force finds evidence lacking on whether routine screening for prostate cancer improves health outcomes. Retrieved February 20, 2006, from <http://www.ahrq.gov>
- American Cancer Society. (2007). Cancer facts and figure – 2007. Atlanta: American Cancer Society, Inc.
- American Cancer Society (2007). Cancer facts & figures for African Americans. Atlanta: American Cancer Society, Inc.
- American Cancer Society (2007). Cancer Prevention & early detection facts & figures. Atlanta: American Cancer Society, Inc.
- Bent S, Kane, C, Shinohara, K., Neuhaus, J., Hudes, E.S., Goldberg H., Avins, A.L.N. (2006). Saw palmetto for benign prostatic hyperplasia. New England Journal of Medicine, 354 (6), 557-66.
- Bowen, P., Chen, L., Stacewicz-Sapuntzakis, M., Duncan, C., Sharifi, ., Gh., Kim, H.S., Christov-Tzelkov, K., van Breemen, R. (2002). Tomato sauce supplementation and prostate cancer: lycopene accumulation and modulation of biomarkers of carcinogenesis. Exp Biol Med (Maywood), 227(10), 886-93.
- Briss, P., Rimer, B., Reilley, B., Coates, R., Lee, N.C., Mullen, .P, Corso, P., Hutchinson, A.B., Hiatt, R., Kerner, J., George, P., White, C., Gandhi, N., Saraiya, M., Breslow, R., Isham, G., Teutsch, S.M., Hinman, A.R., Lawrence, R. Task Force on Community Preventive Services. (2004). Promoting informed decisions about cancer screening in communities and healthcare systems. American Journal of Preventive Medicine. Atlanta: Centers for Disease Control and Prevention, Epidemiology Program Office, 26 (1), 81-3.
- Carter, H.B. (2006). Assessing risk: does this patient have prostate cancer? Journal of National Cancer Institute, 98 (8), 506-507.
- Catalona, W. J., (2006). Understanding the facts about PSA testing. The Clinical Advisor, 37-38, 40.
- Combs, G.F. (2004). Status of selenium in prostate cancer prevention. Review. British Journal of Cancer, 91(2), 195-9.
- Dagnelie, P.C., Schuurman, A.G., Goldbohm, R.A., and Van Den Brandt, P.A. (2004). Diet, anthropometric measures and prostate cancer risk: a review of prospective cohort and intervention studies. BJU Int. 93: 1139-1150.

- DiPaola, R.S., and Morton, R.A. (2006). Proven and Unproven Therapy for Benign Prostatic Hyperplasia. New England Journal of Medicine, 354, 632-634.
- Elhilali, M.M. (2000). PSA screening: the bottom line. Canadian Medical Association, 162 (6), 791-92.
- Fouad, M.N., Mayo, C.P., Funkhouser, E.M., Irene Hall, H., Urban, D.A., Kiefe, C.I. (2004). Comorbidity independently predicted death in older prostate cancer patients, more of whom died with than from their disease. Clinical Epidemiology, 57(7), 721-9.
- Frederick, L. (2006). Who gets PSA testing, when? The Clinical Advisor, 1.
- Gerard, M.J. and Frank-Stromborg, M. ((1998). Screening for prostate cancer in asymptomatic men: clinical, legal, and ethical implications. Oncology Nursing Forum, 25 (9), 1561-1569.
- Giovannucci, E.A. (2002). Prospective Study of Tomato Products, Lycopene, and Prostate Cancer Risk, Journal National Cancer Institute, 94, 391-398.
- Giovannucci, E., Rimm, E.B., Liu Y., Leitzmann, M., Wu, K, Stampfer, M.J. and Willett, W.C. (2003). Body mass index and risk of prostate cancer in U.S. health professionals. J Natl Cancer Inst. 95: 1240-1244.
- Godley, P. (1999). Prostate cancer screening: promise and peril – a review. Cancer Detect Prevention, 23(4), 316-24.
- Gronberg, H., Wiklund F., Damber, J.E. (1999). Age specific risks of familial prostate carcinoma: a basis for screening recommendations in high risk populations. Cancer, 86 (3), 477-83.
- Holden, J. and Emery, C.B. (2004). Prostate cancer – primary care providers play critical role. Advance, 28-36.
- Labrie, F. (2000). Screening and hormonal therapy of localized prostate cancer shows major benefits on survival. Review. Cancer Journal, 6, Suppl 2, S182-7.
- Lu-Yao, G., Stukel, T.A., Yao, S-L. (2003). Prostate-specific antigen screening in elderly men. Journal of the National Cancer Institute, 95, 1792-1797.
- Malafa, M.P., Fokum, F.D., Andoh, J., , L.T., Bandyopadhyay, S., Zhan, R., Iizumi, M., Furuta, E., Hor, E., Watabe, K. (2006). Vitamin E succinate suppresses prostate tumor growth by inducing apoptosis. International Journal of Cancer, 118 (10), 2441-7.

- Malik, A., Afaq, F., Sarfaraz, S., Adhami, V.M., Syed, D.N., Mukhtar, H. (2006).  
Pomegranate Juice Inhibits Prostate Cancer. Proceedings of the National Academy of Sciences, 102 (41), 14813-14818.
- Murthy, G.D. Byron, D.P., Pasquale, D. (2004). Underutilization of digital rectal examination when screening for prostate cancer. *Arch. Internal Medicine*, 164, 313-316.
- Myers, R.E. (1999). African American men, prostate cancer early detection examination use, and informed decision-making. *Seminars in Oncology*, 26 (4), 375-381.
- National Cancer Institute, SEER (Surveillance, Epidemiology, and End Results) 1999-2004, SEER Cancer Statistics Review, 1975-2004, Bethesda, MD: National Institutes of Health, Retrieved April 27, 2007, from [http://seer.cancer.gov/csr/1975\\_2004/](http://seer.cancer.gov/csr/1975_2004/)
- News. (2005). Soy and cancer: seeds of answers, but no fruit. *Journal of the National Cancer Institute*, 97 (20), 1494.
- Newsline (2006). Lab research links prostate cancer to a virus. *The Clinical Advisor*, 12.
- O'Dell, K.J., Volk, R.J., Cass, A.R., Spann, S.J. (1999). Screening for prostate cancer with the prostate-specific antigen test: are patients making informed decisions? *Journal of Family Practice*, 48(9), 682-8.
- Patel, M.I., DeConcini, D.T., Lopez-Corona, E., Otori, M., Wheeler, T., Scardino, P.T.  
(2004). An analysis of men with clinically localized prostate cancer who deferred definitive therapy. *Journal of Urology*, 171(4), 1520-4.
- Ransohoff, D.F., McNaughton Collins, M., Fowler, F.J. (2002). Why is prostate cancer screening so common when the evidence is so uncertain? A system without negative feedback. *American Journal of Medicine*, 1;113 (8), 691-3.
- Ransohoff, D.F., McNaughton Collins, M., Fowler, F.J. author reply. (2003). Why is prostate cancer screening so common when the evidence is so uncertain? A system without negative feedback. *American Journal of Medicine*, 1;114 (8), 706.
- Sawaya, M. (2004). Comparison of Dutasteride (Avodart) With Finasteride (Proscar). Retrieved February 28, 2007, from <http://www.anagen.net/truthduta.htm>
- Sheldon, H.F. and Marks, M.D. (2001). Prostate-specific antigen testing – an essential guide to its use and meaning. *Advance for Nurse Practitioners*, 39, 43-44.



- Sheridan, S.L., Harris, R.P., Woolf, S.H. (2004). Shared decision making about screening and chemoprevention. a suggested approach from the U.S. Preventive Services Task Force. *American Journal of Preventive Medicine*. 26 (1), 56-66.
- Smith, D.S., Bullock, A.D., and Catalona, W.J. (1997). Racial differences in operating characteristics of prostate cancer screening tests. *The Journal of Urology*, 158 (5), 1861-1865.
- Stone, S.N., Hoffman, R.M., Tollestrup, K., Stidley, C.A., Witter, J.L., Gilliland, F.D. (2003). Family history, hispanic ethnicity, and prostate cancer risk. *Ethnicity and Disease*, 13 (2), 233-9.
- Weinrich, S. (2001). The debate about prostate cancer screening: what nurses need to know. *Seminar in Oncology Nursing*, 17 (2), 78-84.
- Whittemore, A.S., Kolonel, L.N., Wu, A.H., John, E.M., Gallagher, R.P., Howe, G.R., Burch, J.D., Hankin, J., Dreon, D.M., West, D.W., et al. (2005). Prostate cancer in relation to diet, physical activity, and body size in blacks, whites, and Asians in the United States and Canada. *J Natl Cancer Inst*. 87: 652-661.

### Appendices

- PI Curriculum Vitae
- Meeting Abstracts
- Study Personnel
- PI Contact Information

**DUKE UNIVERSITY MEDICAL CENTER  
CURRICULUM VITAE**

Date Prepared: August 2007

Name (complete with degrees): Marva L. Mizell Price, DrPH, MPH, FNP, FAAN

Primary academic appointment: School of Nursing

Primary academic department: School of Nursing

Secondary appointment (if any) – (department):

Present academic rank and title (if any): Assistant Professor

Nursing Licensure: North Carolina Registered Nurse

Original Date of License (Month/Day/Year): August 1972

Renewed November 2007

Specialty certification(s) and dates (Month/Day/Year):

St. Margaret's Hospital, Boston: Natural Family Planning Instructor, 1988.

American Nurses Credentialing Center (ANCC): Family Nurse Practitioner, Issued 1982; recertified March 2002, 2007-2012.

North Carolina Medical Board of Nursing: Family Nurse Practitioner, Initial Approval 11/ 1974; Reapproved 11/2006-11/2007.

Re-credentialed by Duke University Medical Center Credentialing Service, June 28, 2006

Social Security number: xxx-xx-2343

Date of birth: 11-25 Place: Columbia, N.C. USA

Citizen of: USA

Visa status (if applicable): N/A

<u>Education</u>	<u>Institution</u>	<u>Date (Year)</u>	<u>Degree</u>
College	School of Nursing N.C. Agricultural & Technical State University Greensboro, NC	1972	B.S.N.
Graduate or Professional School	School of Public Health, Department of Maternal and Child Health, University of North Carolina, Chapel Hill, NC	1974	Master of Public Health (M.P.H.) in Maternal Child Health
	School of Nursing University of North Carolina, Chapel Hill, NC	1974	Family Nurse Practitioner
	School of Nursing University of Washington, Seattle, Child Development and Mental Retardation Center	1979	Post-Masters in Developmental Pediatrics
	School of Public Health, Department of Maternal and Child Health and Program in Public Health Leadership, University of North Carolina, Chapel Hill, NC	1997	Doctor of Public Health (Dr.P.H). in Maternal and Child Health and Public Health Leadership
		1995-1997	Predoctoral Fellow, Cancer Prevention and Detection: University of North Carolina Lineberger Comprehensive Cancer Center, Chapel Hill

**Scholarly Societies/Awards:**

1973-present	Invited, Delta Omega Honor Society in Public Health
1974- present	Invited and Inducted, Sigma Theta Tau, Alpha Alpha Chapter, International Honor Society in Nursing; Junior and Senior Counselor, 1978-1980
1993	Great 100 Award For Nursing Excellence In North Carolina for Outstanding Contributions to the Profession of Nursing
1995-1996	Albert Schweitzer Fellowship
1995-1997	Lineberger Comprehensive Cancer Center, University of North Carolina, Pre-Doctoral Fellowship
1995	American Nurses Association Ethnic Minority Fellowship (accepted as unfunded award)
1996- present	Inducted, Charter Member, Sigma Theta Tau, Mu Tau Chapter, International Honor Society in Nursing
1996	Alumni Student Award, UNC School of Public Health, awarded at the UNC School of Public Health Annual Alumni Conference
1997	Community Health Nurse of the Year, North Carolina Nurses Association
2002- present	Invited and Inducted, Fellow, American Academy of Nursing

2005 American Academy of Nurse Practitioners State Award for Excellence  
2007 Invited and inducted, Fellow of the American Academy of Nurse Practitioners

Professional training and academic career:

<u>Institution</u>	<u>Position/Title</u>	<u>Date</u>
<b>Post-Baccalaureate:</b>		
Annie Penn Memorial Hospital Reidsville, NC	Registered Nurse Rotated on all services in a 120 bed community hospital (Medical/surgical, ER, Delivery Room, Pediatrics, Recovery Room)	1972-1974
<b>Post-Master's:</b>		
University of North Carolina, School of Public Health, Department of Public Health Nursing for Orange Chatham Comprehensive Health Services, Chapel Hill, NC	Family Nurse Practitioner	1974
University of North Carolina Employees Health Services, Chapel Hill, NC	Family Nurse Practitioner	1974-1976
University of North Carolina, Chapel Hill, NC Division for Disorders of Development and Learning (currently Center for Development and Learning)	Family Nurse Practitioner	1976-1982
State of North Carolina Department of Health and Human Services, Winston Salem & Raleigh, NC	Family Nurse Practitioner and Nursing Consultant, Family Planning and Women's Health, Division of Maternal Child Health	1982-1991
Duke University Medical Center, Durham, NC Department of Obstetrics and Gynecology, Division of GYN Oncology	Family Nurse Practitioner and Program Coordinator, Women's Cancer Screening Program & Cervical Dysplasia Private Clinic	1991-1994
Chatham County Health Department Pittsboro, NC	Interim Health Director	1992
Kaiser Permanente Durham-Chapel Hill Office, NC	Chief Executive Officer	1994
Randolph County Health Department, Family Planning Clinic, Asheboro, NC	Family Nurse Practitioner	1996
<b>Post-Doctorate:</b>		
Duke University School of Nursing, Durham Family Nurse Practitioner Program Program Director, Family Nurse Practitioner Program	Clinical Assistant Professor	1996-2001
	Assistant Professor	May 2002-present

**Publications:**

**1. Refereed journals:**

1. **Price, M.M.** (1980). Critique of the Milani-Comparetti Motor Development Screening Test. Physical And Occupational Therapy In Pediatrics, 1 (1), 59-68.
2. Smith, E.M., Phillips, J.M., & **Price, M.M.** (2001). Screening and early detection among ethnic minority women. Seminars in Oncology Nursing, 17 (3), 159-170.
3. Van Buren, K.G. & **Price, M.M.** (2002). Recognizing Obstructive Sleep Apnea in Children. The American Journal for Nurse Practitioners, 6(7), 9-17.
4. Brown, S.M. & **Price, M.M.** (2003). Man with swollen lips and tongue. Clinician Reviews, 13 (4): 81-86. (*article on Ace-Inhibitors for Hypertension*)
5. National Organization of Nurse Practitioner Faculty (NONPF) Practice Doctorate Task Force: Marion, L., Viens, D., O'Sullivan, A.L., Crabtree, K., Fontana, S. **Price, M.** (2003). The Practice Doctorate in Nursing: Future or Fringe? NONPF Practice Doctorate Task Force. Topics in Advanced Practice Nursing eJournal 3 (2), 2003. © 2003 Medscape.
6. Marion, L., O'Sullivan, A.L. Crabtree, M. K., **Price, M.** Fontana, S. (2005). Curriculum Models For The Practice Doctorates In Nursing. Medscape. Topics in Advanced Practice Nursing eJournal 5 (1), 2005. © 2005 Medscape.

**2. Non-refereed publications:**

1. **Price, M.M.** (1980). Why do they suck their thumbs? Baby Talk, 46 (5), 28-29.
2. **Price, M.M.** (1982). Thumbsucking, Pediatric Currents, 31 (1).
3. **Price, M.M.** (1985, April 7; 1980, October 5). Thumb, finger sucking common behavior in caring for kids, Chapel Hill Newspaper.
4. **Price, M.M.** (1986). Nurse practitioners are also caught in national malpractice insurance crunch, Contraceptive Technology Update, American Health Consultants: Atlanta, 7 (11), 138-139.
5. **Price, M.M.** (1987). OC user's recurrent candidiasis may require multiple treatment strategies, Contraceptive Technology Update, American Health Consultants: Atlanta, 8 (1), 9-11.
6. **Price, M.M.** (1987). Nurse practitioner has complex role in managing high-cholesterol patients, Contraceptive Technology Update, American Health Consultants: Atlanta, 8 (4), 49-50.
7. **Price, M.M.** (1987). Help long-term OC users manage healthy, gradual return to fertility, Contraceptive Technology Update, American Health Consultants: Atlanta, 8 (6), 82-83.
8. **Price, M.M.** (1987). Try varied approaches to encourage our OC patients to stop smoking, Contraceptive Technology Update, American Health Consultants: Atlanta, 8 (8), 101-103.
9. **Price, M.M.** (1987). North Carolina's NFP initiative is effective and well received, Contraceptive Technology Update, American Health Consultants: Atlanta, 8 (10), 133-134.
10. **Price, M.M.** (1987). Physically, mentally disabled teens require special contraceptive care, Contraceptive Technology Update, American Health Consultants: Atlanta, 8 (12), 154-156.
11. **Price M.M.** (1988). Find alternatives for patients using 80 to 100 mcg estrogen OCs. Contraceptive Technology Update. 9 (7): 86-87.
12. **Price, M.M.** & Price, L.N. (2002). Concerns of white and African American consumers about colon cancer screening. In M. Kowalski (Ed.). Transcultural Nursing Special Interest Newsletter – Oncology Nursing Society, 12 (1), 1-3.
13. **Price, M.M.** & Price, L.N. (2002). Concerns of white and African American consumers about colon cancer screening. Prevention and Detection Special Interest Newsletter – Oncology Nursing Society, 12 (3), 1-3.
14. **Price, M.,** Flagler, S., Honig J., Huffstutler, S., Lock, S., and Stegbauer, C. (2006). Recommendations for Faculty Qualifications, Faculty Development, and Student Admissions Criteria. Retrieved October 9, 2006, from the National Organization of Nurse Practitioner Faculties Practice Doctorate Resource Center Web site:  
<http://www.nonpf.com/NONPF2005/PracticeDoctorateResourceCenter/PDsubcommittee1.htm> &  
<http://www.nonpf.com/NONPF2005/PracticeDoctorateResourceCenter/PDResourceCenter.htm>

**3. Chapters in books:**

1. **Price, M.M.** (1980). Special Populations Sexual Abuse of the Developmentally Disabled. In D. Kay, Leadership Training Workshops. Bethesda: National Institute of Mental Health, National Center for Prevention and Control of Rape. Training Grant No. T31MH15664.

2. **Price, M.M.** (1985). Nursing Care of the Child With A Mental Deficiency. In S.R. Mott, N.S. Fazekas, & S.R. James, (Eds.), Nursing Care of Children and Families, pp. 755-783, Menlo Park, CA: Addison-Wesley Publishing Co.
3. Phillips, J. **Price, M.M.** (2002). "Breast Cancer Prevention and Detection: Past Progress and Future Directions". In K. Jennings-Dozier & S. Mahon, S. (Eds.), Cancer Prevention, Detection and Control: A Nursing Perspective, Pittsburgh, PA. Oncology Nursing Press.
4. **Price, M.M.** (2002). Health Promotion with African American women. In C.C. Clark, Health Promotion in Communities: Holistic and Wellness Approaches, pp. 355-381, New York: Springer Publishing Company.

**4. Books: N/A**

**5. Non-authored publications (contributions noted in author's acknowledgements):**

1. Public Sector NFP Program, (1988). The NFP Reader, 5 (1), Bethesda: KM Associates.
2. Nurses, physicians prefer different postpartum prescriptions practices, Contraceptive Technology Update, (1986). American Health Consultants: Atlanta. 7 (9).
3. - Exams Key to Detecting Cancer In Men, Duke Center for Integrative Medicine, The Herald Sun, August 7, 2003, Cancer Seminars to Open Today, The Herald Sun, January 30, 2004.

**6. Other Materials:**

**a. Published scientific reviews (for mass distribution):**

**Book Reviews:**

1. **Price, M.M.** (1983). Effectiveness of pediatric primary care. J. S. O'Shea & E.W. Collins, (Eds.), in Physical And Occupational Therapy in Pediatrics.
2. **Price M.M.** (1986). Diagnosis and management of the hospitalized child. H.B. Levy, S.H. Sheldon, & R.F. Sulayman (Eds.), in Physical and Occupational Therapy in Pediatrics, 6 (1), 109-110.
3. Lederer, et al. (1986). Care planning pocket guide. Ed 2. Menlo Park, CA: Addison-Wesley.
4. **Price, M.M.** (1986). Minimizing high-risk parenting. R.A. Hoekelman & P.A. Media (Eds.), in Physical and Occupational Therapy In Pediatrics, 6 (2), 125-126.
5. **Price, M.M.** (1987). Chronically ill children and their families. N. Hobbs, J.M. Perrin, & H.T. Ireys (Eds.), in Physical And Occupational Therapy In Pediatrics, 7 (3), 107-108.
6. **Price, M. M.** (1988). Children with handicaps: A medical primer. Ed 2. M.L. Batshaw & Y.M. Perret (Eds.), in Physical And Occupational Therapy in Pediatrics, 8 (1), 117-118.
7. **Price, M.M.** (1989). The invulnerable child. E.J. Anthony & B.J. Cohler (Eds.), in Physical And Occupational Therapy In Pediatrics, 9 (3), 160-161.
8. Scoggin, J. & Morgan, G. (2001). Practice guidelines for obstetrics and gynecology. Baltimore: Lippincott, Williams & Wilkins.

**b. Selected Abstracts:**

1. **Price, M.M.** (1986, May). "Nurse Practitioner Prescribing Practices", Paper presented at the Annual Conference on Women's Health for Nurse Practitioners, Emory University, Atlanta
2. **Price, M.M.** (1988, May). "Helping Family Planning Patients Stop Smoking", Paper presented at the Annual Conference on Women's Health for Nurse Practitioners, Emory University, Atlanta
3. **Price, M.M.** (1989, May). "Is There an Ideal Contraceptive for the Breastfeeding Woman?" Paper presented at the Annual Perinatal Nursing Conference, Duke University Medical Center, Durham, NC
4. **Price Price, M.M.** (1993, February). "Cancer Prevention and Early Detection – Changing Lifestyles in Vulnerable Populations", Paper presented at the Health Promotion Disease Prevention Nursing Conference, Friday Conference Center, University of North Carolina School of Nursing, Chapel Hill

5. **Price, M.M.** (1994, April). "Cancers That Worry Women the Most and Screening Dilemmas", Paper presented at the Annual Spring Symposium for Primary Care Nurse Practitioners, Charlotte.
6. **Price, M.M.** (1994, October). "Developing and Using Computer Generated Slides for Oral Presentations", Paper presented at the Dissemination Workshop during the Oncology Nurses Symposium on Cancer in African Americans, Atlanta.
7. **Price, M.M.** (1994, October 28-30). "Living with Genital Herpes: Counseling the Patient", Paper presented and Seminar Moderator for the Burroughs Wellcome Pharmaceutical Corporation Nursing Conference on Genital Herpes, Research Triangle Park, NC.
8. **Price, M.M.** (1995, April, Miami; 1995, March, Washington, DC; & 1995, February, Philadelphia). "Breast Health", Papers presented at the National Black Nurses Association Regional Conferences.
9. **Price, M.M.** (1995, August). "Gynecologic Cancers-Cervical Cancer", Paper presented at the National Black Nurses Association National Conference, Washington, DC.
10. **Price, M.M.** (1996, August). "Cervical Cancer", Paper presented at the Oncology Nursing Society Post-Conference Seminar at the Annual Meeting of the National Black Nurses Association, Chicago.
11. **Price, M.M.** (1997, May). "What Your Mother Needs to Know about Breast Health, Paper presented at the 9<sup>th</sup> Annual National Black Graduate Student Conference, Research Triangle Park, NC.
12. **Price, M.M.** (1997, August). "Cervical Cancer", Paper presented at the North Carolina Baptist Ushers Conference on Cancer Prevention, UNC Lineberger Comprehensive Cancer Center and the UNC School of Public Health Summer Public Health Conference, Raleigh, NC.
13. **Price, M.M.** (1997, August). "Intergenerational Influences on Cervical Cancer Screening", Poster Session presented at the Women's Health Issues – A Global Nursing Perspective, University of Cincinnati, St. Thomas, Virgin Islands.
14. **Price, M.M.** (1997). Generational Influences on Cervical Cancer screening and the capacity of the public health system to assure responsive Services. Dissertation Abstracts International, University of North Carolina, Chapel Hill. Microfiche No. W4.P9462. 1997.
15. **Price, M.M.** (1998, August). "Intergenerational Influences on Cervical Cancer Screening", Paper presented at the 11<sup>th</sup> Union of International Cancer Congress, Rio de Janeiro, Brazil.
16. **Price, M.M.** (1999, April). Enhancing nurse educators' knowledge base to teach their students cancer prevention and early detection in African Americans; and Using the Albert Schweitzer fellowship program to foster cross-cultural experiences for nurse practitioner students. Symposium conducted at the annual meeting of the National Organization of Nurse Practitioner Faculties (NONPF), San Francisco.
17. **Price, M.M.** (1999, November). "African American Women's Concerns about Cervical Cancer Screening", Paper presented at the American Public Health Association Annual Convention, Chicago.
18. **Price, M.M.** (2000, February). "African American Women's Concerns about Cervical Cancer Screening", Paper presented at the 7<sup>th</sup> Biennial Symposium on Minorities, The Medically Underserved & Cancer, Addressing the Unequal Burden of Cancer, Washington, DC. Published Abstract p. 41.
19. **Price, M.M.** (2000, March). "African American Women's Concerns About Cervical Cancer Screening", Paper presented at the Howard University School of Nursing Research Day, Washington, DC.
20. **Price, M.M.** (2000, April). "Creating a Faculty Research Opportunity with a Community Prostate Cancer Screening Program", Paper presented at the National Organization of Nurse Practitioner Faculties (NONPF) 26<sup>th</sup> Annual Conference, Washington, DC.



21. **Price, M.M.** (2000, August 3; July 30). "Follow-up of Men Who Participate in a Free Community Day Prostate Cancer Screening Clinic", Poster Session presented at the 11<sup>th</sup> International Conference on Cancer Nursing-Building The Future, Oslo, Norway.
22. **Price, M.M.** (2000, August). "Follow-up of Men who Participate in a Free Community Day Prostate Cancer Screening Clinic" and Generational Influences on Cervical Cancer Screening", Papers presented at the National Black Nurses Convention, Washington, DC
23. **Price, M.M.** (2000, September). "Gynecologic Cancers", Paper presented at the National Astra Zeneca Challenge Conference for Oncology Nurses, Atlanta.
24. **Price, M.M.** (2000, November). "Free Community Prostate Cancer Screening: Who Attends and Why?", Paper presented at the American Public Health Association Annual Convention, Boston. Published Abstract – Session 4018.0 p. 202.
25. **Price, M.M.** (2001, February 16). "Free Community Prostate Cancer Screening: Who Attends and Why?" Poster Session presented at the Annual School of Public Health Minority Health Conference, University of North Carolina, Chapel Hill.
26. **Price, M.M.** (2001, September). "Free Community Prostate Cancer Screening: Who Attends and Why", Paper presented at the Biennial Conference of the Center for Disease Control and Prevention (CDC), Using Science to Build Comprehensive Cancer Programs: A 2001 Odyssey, Atlanta.
27. **Price, M.M.** (2001, October). "Lessons Learned From 58 African American Men About Prostate Cancer Screening", Paper presented at the American Public Health Association Annual Convention, Atlanta.
28. **Price, M.M.** (2002, June). "Free Community Prostate Cancer Screening in A Small Urban Community". Poster presented at the 18<sup>th</sup> Union of International Cancer Congress, Oslo, Norway.
29. **Price, M.M.** (2002, August). "Prostate Cancer Screening – Who Attends and Why". Podium presentation at the 12<sup>th</sup> International Conference on Cancer Nursing 2002: Making A Difference, London. Published Abstract, p. 28.
30. **Price, M.M.** & Robertson, C.N. (2002, September). "Increasing Sustained Participation in Free Mass Prostate Cancer Screening Clinics". Poster presentation at the Ninth Annual CapCure Scientific Retreat Program, Washington, D.C.
31. **Price, M.M.**, Powe, B.D., & Underwood, S.M. (2003, March). Symposium 22 "From Research to Practice to Policy: Designing Research-Based Interventions Focused on Cancer Prevention and Control Among African-Americans". 24<sup>th</sup> Annual Meeting and Scientific Sessions for the Society of Behavioral Medicine, Salt Lake City, Utah.
32. **Price, M.M.** (2003, October). "Increasing Sustained Participation in Free Mass Prostate Cancer Screening Clinics in Durham, North Carolina" Sixth Annual Sigma Theta Tau Research Day Conference: Health Disparities in Underserved Minority Populations from a Global Perspective. North Carolina A&T State University School of Nursing, Greensboro, N.C. p.13.
33. **Price, M.M.** (2003, October). "International Cancer Care Nurses Attitudes about Cervical Cancer Screening" Sixth Annual Sigma Theta Tau Research Day Conference: Health Disparities in Underserved Minority Populations from a Global Perspective. North Carolina A&T State University School of Nursing, Greensboro, N.C. p.24.
34. **Price, M.M.**, & Combs, I. (2003, November 7-9). "How to Use Innovative Health Education and Screening Programs to Promote Health in the African American Community: Durham, North Carolina and Omaha, Nebraska". Symposium conducted at the 4<sup>th</sup> Annual Institutes of Learning Conference. Oncology Nursing Society, Philadelphia, Published Abstract p. 27-31.
35. **Price, M.M.**, Jackson, S.A., & Robertson, C.N. (2004, March). "Utility of Longitudinal Prostate Specific Antigen Measures in a Screening Population", Intercultural Cancer Council and Baylor College of Medicine: 9<sup>th</sup> Biennial Symposium on Minorities, The Medically Underserved & Cancer, Washington, D.C. Published Abstract p. 37.

36. **Price, M.M.** (August 2004). "International Cancer Care Nurses Attitudes About Cervical Cancer Screening". Podium presentation at the 13<sup>th</sup> International Conference on Cancer Nursing 2004: Celebrating Diversity, Sidney, Australia. Published Abstract
37. **Price, M.M.,** Jackson, S.A., & Robertson, C.N. (2004, November). "Utility of Longitudinal Prostate Specific Antigen Measures in a Screening Population", poster presentation at the 132<sup>nd</sup> Annual Convention of the American Public Health Association, Washington, D.C. Published Abstract p. 37.
38. **Price, M.M.** (2005, June). "Partnering Mentoring and Education in Prostate Cancer Control", Cancer Prevention and Detection Dissemination Colloquium, invited, podium presentation as outcome of the NCI and Oncology Nursing Society grant collaboration, Chicago.
38. **Price, M.M.,** Robertson, C.N. & Jackson, S.A., (2006, March). "Longitudinal Variation in Prostate-Specific Antigen Levels in a Screening Population". Poster presentation at the 70<sup>th</sup> Annual Meeting of the Southeastern Section, American Urological Association, Inc, Rio Grande, Puerto Rico, Published Abstract p. 110.
39. **Price, M.M.,** Robertson, C.N. & Jackson, S.A., (2006, March). "Longitudinal Variation in Prostate-Specific Antigen Levels in a Screening Population". Poster presentation, Duke University Medical Center Comprehensive Cancer Center Annual Meeting, Published Abstract p. 137.
40. **Price, M.M.** (2006, March). "Intergenerational Influences on Cervical Cancer Screening in African American Women in Eastern North Carolina", Poster presentation, Duke University Medical Center Comprehensive Cancer Center Annual Meeting, Published Abstract p. 138.
41. Echols, P. & **Price, M.M.** (2006, April). "The Association of Race on Prostatic Specific Antigen (PSA) Velocity and PSA Doubling Time Prior and Post Radical Prostatectomy", Podium presentation, Intercultural Cancer Council-10<sup>th</sup> Biennial Symposium on Minorities, the Medically Underserved and Cancer, Baylor College of Medicine-Houston, TX, held in Washington, D.C.
42. **Price, M.M.** & Robertson, C.N. (2006, March). "Increasing Sustained Participation in Free Mass Prostate Cancer Screening Clinics". Poster presentation, Duke University Medical Center Comprehensive Cancer Center Annual Meeting, Published Abstract p. 139.
43. **Price, M.M.** (2006, June). "Prostate Cancer Screening: Coming to Terms with Controversies". Podium presentation, American Academy of Nurse Practitioners, 21<sup>st</sup> National Conference, Dallas, Texas.
44. **Price, M.M.** (2007, June). "Latest Developments in HPV-related diseases and Cervical Cancer ". Podium presentation, American Academy of Nurse Practitioners, 22<sup>st</sup> National Conference, Indianapolis.
45. **Price, M.M.** (2007, June). "Prostrate Cancer Screening: What Will We Tell Our Patients?". Podium presentation, American Academy of Nurse Practitioners, 22<sup>st</sup> National Conference, Indianapolis.

**Community Presentations (Non-Abstract):**

1. **Price, M.M.** (1991, May). "Contraception Following Pregnancy Induced Hypertension and other High Risk Medical Conditions. Paper presented at the Perinatal Nurse Conference, Durham County Hospital Corporation, Durham, NC
2. **Price, M.M.** (1996, December). "Breast Health: What African American Nurses Want to Know", Luncheon Keynote presented for the Central Carolina Black Nurses Council, Inc., Durham, NC
3. **Price, M.M.** (1997, May). "What Your Mother Needs to Know about Breast Health, Paper presented at the 9<sup>th</sup> Annual National Black Graduate Student Conference, Research Triangle Park, NC
4. **Price, M.M.** (1997, October). "Breast Health: What African American Women Need to Know", Luncheon Keynote presented for the Community Breast Cancer Awareness Seminar, Sponsor – Delta Sigma Theta Chapel Hill Alumnae Chapter, Inc, Chapel Hill, NC
5. **Price, M.M.** (2000, October). "Breast Self-Examination", Luncheon Keynote at the Community Breast Cancer Awareness Seminar, Sponsor – Delta Sigma Theta Chapel Hill Alumnae Chapter,

- Inc., Chapel Hill, NC
6. **Price, M.M.** (2001, March). "Nutrition and Colorectal Cancer Screening", Seminar presented for Fearrington Village Cares Group, Pittsboro, NC, Co-sponsor – Oncology Nursing Society
  7. **Price, M.M.** (2001, April). "Nutrition and Colorectal Cancer Screening", Seminar presented for the Corinth AMEZ Church, Siler City, NC, Co-sponsor – Oncology Nursing Society
  8. **Price, M.M.** (2003, June). "Prostate Health", Presentation for Ebenezer Baptist Church, Durham, NC
  9. **Price, M.M.** (2003, March). "Prostate Health", Presentation for Peace Missionary Baptist Church, Durham, NC
  10. **Price, M.M.** (2004, October). "Prostate Health", Presentation for Mt. Zoar Baptist Church, Durham, NC
  11. **Price, M.M.** (2005, March). "Prostate Health", Presentation for Men's Health Group, Lincoln Community Health Center, Durham, NC
  12. **Price, M.M.** (2006, March; 2007, June). "Prostate Health", Presentation for Men's Health Group, St. Mark AME Church, Durham, NC

#### Continuing Education Courses:

Faculty, Oncology Nursing Society Three-Day National Institutes on Cancer Prevention and Detection in African Americans, Funded by the National Institutes of Health National Cancer Institute, "Cervical Cancer", 30-40 participants per Institute

*Atlanta, February 2005			
*Chicago, January 2003	*Miami, February 2004	*Miami, May 2004	*Baton Rouge, October 2004
*Miami, June 2002	*Atlanta, September 2000	*Milwaukee, September 1999	**Philadelphia, December 1993
*Miami, March 2002	*Milwaukee, June 1998	**Chicago, August 1996	**Seattle, October 1993
*Miami, August 2001	*Milwaukee, July 1998	**Philadelphia, March 1995	**Lexington, KY April 1993
*Washington, D.C. June 2001	*Milwaukee, August 1998	**Miami, April, 1995	**Pittsburgh, June 1990
*Houston, January 2001	*Milwaukee, August, 1999	**Atlanta, October 1994	

\*School of Nursing Faculty –Curriculum Development

\*\*Registered Nurses –Community Outreach

#### Organizations and participation (regional and local):

Dates	Office held and/or Committee Assignment	Organization
2002-2003	<u>International:</u> Member	Union of International Cancer Congress Nursing Committee, Geneva, Switzerland. Congress, Oslo, Norway
2002-2004	Member	International Society of Nurses in Cancer Care (ISNCC)
1974-present	<u>National:</u> Member	American Public Health Association
1974-2002	Member	American Nurses Association
1978-2004	Member	National Black Nurses Association (local chapter: Central Carolina Black Nurses Association)
1998-2004	Member Scientific Advisory Board Member	American Social Health Association, RTP, NC, National Cervical Cancer and Human Papilloma Virus Project
1995-present	Member	Oncology Nursing Society
January-August 2000	10 member committee from across the U.S. charged with planning a community outreach course on cancer screening and detection for 300 oncology nurses	ONS National Challenge Conference, Conference held in Atlanta, September 14-17, 2000
January – April	Committee Member for participant follow up	Invitational for Best 100 Oncology Nurse

<b>Dates</b>	<b>Office held and/or Committee Assignment</b>	<b>Organization</b>
2002	and to plan a reunion luncheon and poster session	Community Outreach Cancer Prevention and Early Detection Programs, held in Washington, D.C., April 20, 2002
1997-2004	Member 2003-2006 Member, Clinical Doctorate Task Force, National Organization of Nurse Practitioner Faculties (NONPF)	National Association of Nurse Practitioner Faculties (NONPF).
2006-	Chair, subcommittee on Faculty Qualifications, Faculty Development, and Student Admissions Criteria	
March 2005	Member, National The Susan G. Komen Breast Cancer Foundation African American Advisory Council	Meetings 2 x year
1994; serving 4 <sup>th</sup> term; Gubernatorial appointment	<u>State:</u> Member, the Public Health Commission writes the rules for all legislation passed by the North Carolina General Assembly including environmental and personal health legislation, immunization laws, restaurant and lodging grading standards, childcare facility, food establishment grading standards, HIV, smallpox, other communicable disease control.	Governor's 12 member Commission for Health Service (Public Health Commission), Raleigh. Quarterly meetings.
1995-1997	Chair, Evaluation and improvement of cancer screening services (clinical, laboratory, and radiological) for women in private and public sector clinics	North Carolina Health and Human Services, Department of Health, Breast and Cervical Cancer Assurance Committee
2000-present	Member, Board of Advisors and Fellowship selection subcommittee. The Foundation provides paid fellowships for community service learning projects conducted by medical, dental, nursing, veterinarian, and law graduate and professional students across North Carolina universities with major medical centers.	The Albert Schweitzer Foundation; fellow interview and selection annually in March; fellowship mentorship, and guidance in seminar development; meetings once a year, Duke School of Nursing student mentoring.
2001-2002	Member	Old North State Medical Society, Raleigh-Durham Chapter
1975-present	Member;	North Carolina Nurses Association (formerly District Eleven)
1985-1987	Secretary for Triangle Region;	
2001-2003	Commission on Standards and Practice	
January 2000	Participant, North Carolina Nurses Association Leadership Day	North Carolina Nurses Association
January 2000-2001	Participant, Awards Selection Committee for Outstanding Nursing Leadership and Service	North Carolina Nurses Association
2001-2003	Commission on Standards and Practice	North Carolina Nurses Association
February 2003	Member, Advisory Board	University of North Carolina School of Public Health, Department of Maternal and Child Health, participated in review of candidates for department chair; annual board meetings
1986-1987	<u>Local:</u> Member, Board of Directors	Piedmont Health Care, Inc. Federally funded primary care centers in three rural North Carolina counties
1993-1994	Chair	Chatham County Board of Health
1989-2000	Board Member	
2001-2004	Member	Copernicus Group Independent (International) Review Board, Inc. Cary, NC

<b>Dates</b>	<b>Office held and/or Committee Assignment</b>	<b>Organization</b>
2001-2004, County Commissioners Appointment 2004	Member, official certifier for Board proceedings  Executive Board and Health Committee Member	Orange-Chatham-Person Developmental Disabilities and Mental Health Authority (Mental Health Board), monthly meetings  Carolina Meadows Retirement Community, a 700 resident continuing care retirement community, meetings four times a year

**External Support Grant funding:**

<b>PI</b>	<b>% Effort</b>	<b>Purpose</b>	<b>Amount</b>	<b>Duration</b>
PRESENT Principal Investigator, U.S. Army Department of Defense	15%	Collaboration Around Research and Education (CARE) in Prostate Cancer with Bennett College, Greensboro, N.C. to provide beginning prostate cancer education to 12 undergraduate science (biology) students over three years.	\$193,136	Funding cycle 2007-2009
PRESENT Principal Investigator, U.S. Army Department of Defense	20%	Partnering Research Involving Mentoring and Education (PRIME) in Prostate Cancer Training Grant with North Carolina Central University to provide beginning prostate cancer education to 12 undergraduate nursing students over three years.	\$199,000	Funding cycle 2005-2008
Principal Investigator, U.S. Army Department of Defense(Co-PI Mentor: Cary Robertson, M.D.,DUMC)	47%	Prostate Cancer Screening, Health Disparity Research-Prostate Scholar Award: Increasing Sustained Participation in Free Mass Prostate Cancer Screening Clinics Mentor: Cary Robertson, M.D.  Scientific Mentor: Paul Godley, M.D., Ph.D., Surgical Oncologist,  Attend monthly seminars in Methods in Health Disparity Research, cosponsored by the Cecil Sheps Center, UNC School of Public Health; and Lineberger Comp. Cancer Center.	\$406,421.00	Funding cycle 2002- 2006
PI, Cervical Cancer Screening, International Nurses Survey		Attitudes and Practices for Cervical Cancer Screening Among International Nurses in Cancer Care. Surveys conducted at the UICC Congress, Oslo, Norway, June-July	\$500 District Eleven, North Carolina Nurses Association	June 2002- June 2003

PI, Department of Defense	30%	2002 & the International Nurses in Cancer Care, London, August-September 2002		
		Using a Tracking System to Improve Prostate Cancer Screening Follow-up in a Small Urban	\$74,984	2000-2001
PI, Avon-NABCO, Inc	25%	Breast Cancer Access Grant for Nurse Practitioners in Nine-County Area in Southeastern North Carolina	\$75,000 (\$5,000 match by Carson Products, Savannah)	October 1997-98
PI, (Pre-doctoral Fellow), NCI sponsored Cancer Control Education Research Program (CCEP) University of North Carolina Lineberger Comprehensive Cancer Center, Training Grant –CA64060	45%	Intergenerational Influences on Cervical Cancer Screening Dissertation Research	\$20,000	1995-1996
			\$20,000	Renewed 1996-97
PI, Association of School of Public Health and The Association of Teachers of Preventive Medicine, National Center for Infectious Disease, Division of HIV/AIDS, Surveillance Branch, CDC, Atlanta		Protocol Development for Resource Assessment of HIV+ pregnant women's access and use of AZT and other social and medical resources	\$23,000	1994-1995

Clinical Practice (after hours back-up):

Family Nurse Practitioner, Duke University Medical Center Department of Obstetrics and Gynecology, Durham, NC, for Lincoln Community Health Center Prenatal Clinic; approved to practice by the NC Board of Nursing & NC Medical Board to practice as FNP.

Duke IRB #6, 2004- 2007 Departmental Reviews.

Acting Program Director, Oncology Nursing Curriculum, Fall 1999 to August 2000, 30 advisees.

Assistant Professor, School of Nursing, Duke University, Durham. 8/1996-.

Master of Nursing Family Nurse Practitioner Specialty Director, 2002 - 75 Master of Nursing students.

Appointment, Duke University Comprehensive Cancer Center, Department of Cancer Control and Prevention, 2003

Assistant Professor, School of Nursing, Duke University, Durham. 8/1996-.

Master of Nursing Family Nurse Practitioner Program.

Appointment, Duke University Comprehensive Cancer Center, Department of Cancer Control and Prevention, 2003

## **Association Between Inflammatory Markers and Prostate Carcinogenesis: A Meta-Analytic Review**

**Shunyoung Smith, B.A.**

**Background:** Several inflammatory markers are associated with the diagnosis and progression of prostate cancer, but little has been researched regarding the role of inflammation in the actual development of prostate cancer.

**Purpose:** The purpose of this study is to investigate the link between inflammatory markers and prostate cancer.

**Hypothesis:** Elevated levels of certain inflammatory markers are associated with prostate cancer.

**Methods:** An exhaustive literature review was performed using a medical research library, as well as online databases (including PubMed). A meta-analysis was performed to provide an estimate of the magnitude of the effect of inflammatory markers on prostate carcinogenesis.

**Results:** The meta-analysis indicated a fixed effects odds ratio of 1.07 ( $p = 0.19$ ) for the overall effect of inflammatory markers on prostate cancer. The random effects odds ratio approached significance at 1.19 ( $p = 0.08$ ). The trend toward significance indicates that inflammatory markers may be associated with prostate carcinogenesis. In a moderator test for the specific type of marker associated with prostate cancer, Leptin was found to be directly associated with prostate carcinogenesis, with an odds ratio of 1.66,  $p < .001$ .

**Discussion:** Inflammatory markers are associated with the onset and progression of prostate cancer. With more research, a more extensive study can be performed in order to identify the effect of inflammatory markers. For example, exploring the inflammatory marker Leptin on the gene level will be beneficial to research in terms of prevention and treatment.

## Comorbid Medical Conditions and Post-Treatment Quality of Life in African American Prostate Cancer Survivors

Ashton C. Fearrington

**Background:** African American prostate cancer survivors report more comorbid medical conditions than Caucasian prostate cancer survivors. However, little is known about how comorbid medical status relates to the post-treatment symptom experience of African American prostate cancer survivors. Given that prostate cancer survivors must often contend with multiple symptoms following treatment (e.g. sexual, urinary, bowel symptoms), having a comorbid medical condition may reduce quality of life. **Purpose:** This project examined the relationship between comorbid medical conditions and quality of life as indicated by sexual, urinary, bowel, and hormonal symptoms in African American prostate cancer survivors. **Methods:** Participants were 40 African American prostate cancer survivors ( $M_{\text{age}} = 61.4$  years) who were past the acute treatment and recovery phase of their prostate cancer treatment. Participants completed a demographic questionnaire and the Expanded Prostate Cancer Index, a measure of quality of life related to sexual, urinary, bowel, and hormonal symptoms. Analysis of Covariance was used to examine symptom-related quality of life in men without comorbid conditions as compared to men with 1 or more comorbid medical conditions. **Results:** Fifteen men (37.5 %) reported no comorbidities and 25 men (62.5 %) reported 1 or more comorbidities. The most frequent comorbid conditions were circulation problems in legs/feet (22.5%), breathing problems such as asthma or emphysema (22.5%), and stomach ulcer or irritable bowels (22.5%). Age was positively correlated with number of comorbid conditions; therefore, age was used as a covariate in the ANCOVA. Men with comorbid medical conditions reported lower quality of life with regard to bowel function ( $F_{[2,37]} = 6.51, p = .015$ ), bowel bother ( $F_{[2,37]} = 9.69, p = .004$ ), and overall quality of life related to bowel symptoms ( $F_{[2,37]} = 9.76, p = .003$ ), than men with no comorbid medical conditions. Men with comorbid medical conditions also reported lower quality of life in regard to hormonal bother ( $F_{[2,37]} = 12.58, p = .001$ ) and overall hormonal quality of life ( $F_{[2,37]} = 8.25, p = .007$ ), than men with no comorbid medical conditions. **Implications:** Prostate cancer survivors with comorbid medical conditions reported significantly lower quality of life related to bowel and hormonal symptoms follow prostate cancer treatment. These findings suggest that post-quality treatment quality of life in African American prostate cancer survivors is linked to overall physical health. Management of comorbid disease may help improve prostate cancer-related quality of life in these survivors.



## **The Differences between African-Americans and Non-African Americans With Regard to Prostate Specific Antigen From The PSA Era to Present**

**Kenneth C. Joseph, B.A.**

**Background:** African –American (AA) men have been disproportionately affected by prostate cancer (CaP). This study serves to examine the trends in CaP presentation from the beginning of the PSA Era (1988) to present. Differences in the range of PSA levels between the AA group and the Non-AA group were also examined.

**Methods:** Subjects in the study were taken from 14,908 patients in the Duke Prostate Cancer Database. Patients younger than 50 years of age or with unknown race were omitted. The final sample size was 10,527. The racial groups compared were AA-men and Non-AA-men including Caucasian, Latinos, and Asians.

**Results:** The results showed that AA-men had much higher PSA levels than Non-AA men during the earlier years. The range of PSA levels within the groups was greater in AA-men (8-36.7 ng/ml) than Non-AA-men (4.7-17.6 ng/ml). The range in PSA levels has been decreasing steadily within the racial groups from 1988 to present. The disparity in PSA levels between the groups of AA-men and Non-AA-men has been declining steadily over time.

**Discussion:** The amount of the disparity has been declining in the more recent years as screening in AA men now occurs at earlier ages.

## **The Effects of Age and Race on Gleason Score and Tumor Stage**

**Alisha Childs**

**Background:** It is suggested by many that race and age play a large role in both tumor stage and Gleason score of prostate cancer while some studies suggest that there is no relationship.

**Purpose:** The current study evaluated the effects of age and/or race on the Gleason score and tumor stage of prostate cancer.

**Hypothesis:** Both age and race will affect Gleason score and tumor stage based on the analysis of patient records.

**Methods:** Records were obtained for 14,908 patients from the Duke Prostate Cancer Database. Among them, 4581 men received a radical prostatectomy between 1988 and 2006. The data used in this study included those who received a radical prostatectomy between 2000 and 2006. The exclusion criteria included the following: those under age 50, those who received a biopsy, and those with unreported variables such as race. After exclusions were made, the data consisted of 143 African American (AA) men and 759 non-African American (AA) men. These men were divided into the following age groups: those in their 50's, 60's, 70's, and men over 70.

**Results:** Over 60% of AA men diagnosed had a Gleason score  $\geq 7$  regardless of age. Non-AA men did not present a difference in their Gleason scores by age. AA men were more likely to be diagnosed at T3/4 stage compared to non-AA who had a higher percentage of those diagnosed at T2. Also, it was suggested that over 80% of non-AA men had surgery, while less than 17% of AA men chose surgery. With Gleason score, more AA men were diagnosed with a Gleason score  $\geq 7$ . Non-AA participants did not present difference in Gleason score across age.

**Discussion:** Race, rather than age is associated with Gleason score. The majority of non-AA men were diagnosed with a less severe T2 stage. AA men have a higher percentage of T3/4 state and high Gleason scores, indicating that their cancer would grow and spread more rapidly compared to non-AA men.

Student P.E.

### **The Association of Race on Prostatic Specific Antigen (PSA) Velocity and PSA Doubling Time Prior and Post Radical Prostatectomy**

**Goal:** To understand PSA values and prostate cancer development

**Objective:** To compare racial influence on PSA Velocity (PSAD) and PSA Doubling Time (PSAD).

**Background:** African American men are known to have earlier onset of prostate cancer (Pca), higher PSA values at diagnosis, and more advanced presentations of prostate cancer.

Research has identified elevated prostate-specific antigen (PSA) levels and rates of change in PSA levels between consecutive visits as early clinical markers for Pca development. A PSAV higher than 0.75 ng/ml/yr is associated with a higher probability of Pca development; secondly, a PSAD less than 12 years is also predictive of increased risk for Pca development.

**Rationale:** Knowledge of rate of change of the PSA is valuable for clinicians and advanced practice nurses to appropriately counsel their patients on the frequency of routine screening for Pca, and implications for the test results.

**Methods:** My data set included pathology results from biopsies of 357 men suspicious for Pca who had undergone radical prostatectomy. Exclusion criteria were determined with a resultant sample of 149. This included 118 Caucasians, 20 African Americans, 1 Asian, 1 American Indian, and 9 race unknown. All of the biopsy procedures were done between 1997 and 2005 at Duke University Medical Center in Durham, North Carolina. Records from the Microsoft Access data base were access using the Duke University eBrowser to access my mentor, Dr. Leon Sun's Pca database. Microsoft Excel was used to analyze my data.

**Results:** Caucasian patients had a higher average PSAV (27.67 ng/ml/yr) before surgery. African American men had a higher average PSAV (1767.89 ng/ml/yr) post surgery. Caucasian men had a lower average PSAD (0.94) before surgery and the African Americans had a lower average PSAD (0.52) post surgery. Data analysis found that a higher PSAV or lower PSAD are indicators of a higher mortality rate or lower chance of surviving Pca. African American men had a higher PSAV prior to the radical prostatectomy but ended up having the lower PSAD afterwards.

**Implications:** PSAV and PSAD should be watch more carefully by clinicians for early informed discussions about prostate cancer screening, especially among African American men.

## STUDY PERSONNEL

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